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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,878	08/22/2005	Sotiris Koussios	Tech-21/RCE(P61151US00)	4430
7265 7590 09/02/2010 MICHAELSON & ASSOCIATES P.O. BOX 8489 RED BANK, NJ 07701-8489				
EXAMINER				
BRADEN, SHAWN M				
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3781				
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09/02/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/523,878

**Applicant(s)**

KOUSSIOS ET AL.

**Examiner**

SHAWN M. BRADEN

**Art Unit**

3781

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-28 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-28 and 39-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner cannot find clear support for the amended language "unitized integrally formed gas or fluid tight body". More specifically, the language "unitized" would infer a frame, or some other structure for the body to be formed with. The original disclosure is lacking clear support for the amended language.

***Claim Objections***

3. Claim 23 objected to because of the following informalities: In line 16, "where in at least one concave surface section", suggested change " where in the at least one concave surface section". Appropriate correction is recommended.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 23-27,39-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Beukers (European Patent 0 626 338 A1).
6. With respect to claim 23, Beukers shows a unitized integrally formed gas or fluid-tight body (shown well in fig. 10, or 11b) having a continuous outer circumferential surface with a rotation-symmetrical axis (same as applicant describes can be applied to fig. 10 or 11a) that terminates in axial ends (ends of container in fig. 10 or 11a), the body being overwound as an isotensoide (page 2 line 58) with one or more fiber filaments, the fiber filaments having a longitudinal axis defined along their length, wherein the radius of the body outer surface varies with respect to the rotation-symmetrical axis, such that said body outer surface defines at least one concave surface (shown well in fig. 10 and fig. 11a) section spaced apart from the axial ends, wherein each concave surface section has a local minimum radius, and the outer surface further defines at least one convex surface section (shown well in fig. 10 and fig. 11a) spaced apart from the axial ends, wherein each convex surface section has a local maximum radius, wherein at least one concave surface section about its entire outer surface is continuously over wound with a fiber filament as an isotensoide (fig. 8 shows the winding around "the required shape" page 4 line 12) (see also page 4 line 54, Beukers discusses the interior of the bags being connected, thus being overwound as a whole, fig. 11a shows a whole unitized body on the second tier)
7. Beukers shows claim 24, characterized in that wherein the fiber windings in filaments overwinding the at least one concave surface section comprise a plurality of substantially straight fiber filaments forming a hyperboloid when the at least one

concave surface section is non pressurized (fig. 10 shows the hyperboloid between the bellows, the filaments is shown being applied in fig. 8, during the isotesoid process the filaments are inherently substantially strait since they are under tension, thus not allowing them to be curved).

8. Beukers shows claim 25, wherein the pressurizable structure is quasi-geodesically overwound in a continuous fashion (page 2 line 53).

9. Beukers shows claim 26, wherein the longitudinal orientation of the fiber filament along a finite length thereof is oriented substantially perpendicular with respect to the rotation-symmetrical axis of the structure (shown well in fig. 8 ).

10. Beukers shows claim 27, wherein the fiber filaments undergo torsion with respect to the longitudinal center-line thereof is in a pressurized state, whereby substantially one side of the curved fiber remains in contact with the body in the at least one concave surface section (fig. 8 shows a twist in the filament meeting the claim as it is understood).

11. Beukers shows claim 39, wherein the body is flexible, i.e., non-rigid, and formed about the fiber filaments (page 4 line 14).

12. Beukers shows claim 40, whereby the axial length of at least one axial section of the pressurizable structure is variable with respect to the longitudinal axis of the pressurizable structure (fig. 10 shows varying lengths).

13. Beukers shows claim 41, wherein at least one axial section of the pressurizable structure is pivotable (these flexible bags are able to flex in all direction thus meeting the

structure and recitation of pivot) with respect to the longitudinal axis of the pressurizable structure.

14. Beukers shows claim 42, wherein at least one axial section of the structure is pivotable with respect to an axis, wherein the axis is orthogonal to the longitudinal axis of the pressurizable structure (again the flexibility of the structure shown in fig.10 with the bellows will meet this recitation).

15. Beukers shows claim 43, wherein at least one axial section of the pressurizable structure comprises a combination of at least two of the following technical elements; (i) at least one axial section of the pressurizable structure is pivotable (flexing) with respect to the longitudinal axis of the pressurizable structure; (ii) the axial length of the at least one axial section of the structure is variable (fig. 10 show varying lengths) with respect to the longitudinal axis of the pressurizable structure; (iii) the axial section of the structure is pivotal (flexing) with respect to an axis, wherein the axis is orthogonal to the longitudinal axis of the pressurized structure.

16. Beukers shows claim 44, a three dimensional arrangement tanks capable of holding fuel (fig. 4)

***Allowable Subject Matter***

17. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

18. Applicant's arguments filed 05/26/2010 have been fully considered but they are not persuasive.

19. In response to applicant requesting the restriction requirement of claims 45-38 be removed. These claims are viewed as independent and distinct, they where not previously examined. Upon finding allowable subject matter, the dependent claims are eligible for rejoinder.

20. In response to applicant's argument with respect to "EP 338". Applicant stresses that the reference is "ball shaped" and that "the structures shown in fig. 10 are combination s of separate ball structures that are strung together, analogous to a string of pearls or a shish kabob skewer". Applicant has not cited any support for this interpretation of the EP 338 reference. The abstract of the reference states "non-spherical" in direct kontras of "ball shaped". The last two paragraphs on page 4 discuss different shapes, including the shapes in fig. 10, page 4 lines 11 and 12 discuss winding "the continuous fiber around a rotation symmetric body having the required **shape**". Further supporting winding fiber around different shapes. Page 4 line 54, discloses "interior of the various bags may be connected with each other". This would mean that the bags are not separate balls strung together, yet made as one shapes overwound with continuous fiber. Also fig. 11b shows two tiers of a unitized structure, not 3 separate balls.

***Conclusion***

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAWN M. BRADEN whose telephone number is (571)272-8026. The examiner can normally be reached on Mon-Friday 9-6:30 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571)272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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